IN THE CLAIMS:

Claims 1-4, 6-9, 13 and 16-19 are amended herein. All of the pending claims 1 through 31 are presented below. This listing of claims will replace all prior versions and listings in the application.

1. (Currently amended) A nucleic acid library comprising:
genes or a functional fragment thereof, said genes or said functional fragment thereof essentially capable of, directly or indirectly, modulating an immune response observed with airway hyperresponsiveness and/or bronchoalveolar manifestations of asthma.

2. (Currently amended) The nucleic acid library of ~~claim 1~~ claim 1, wherein the immune response is up-regulated.

3. (Currently amended) The nucleic acid library of ~~claim 1~~ claim 1, wherein the immune response is down-regulated.

4. (Currently amended) The nucleic acid library of claim 1, wherein said nucleic acid library comprises a nucleic acid essentially equivalent to a signature sequence as identified ~~as shown~~ in Table 1, Table 2 or Table 3.

5. (Previously presented) The nucleic acid library of claim 1, wherein at least one of said genes encode a molecule selected from the group consisting of a regulatory molecule, a co-stimulatory molecule, an adhesion molecule, a receptor molecule, a calcium activated chloride channel, a DC-SIGN molecule involved in modulating an immune response, and combinations thereof.

6. (Currently amended) A method for modulating an immune response in an individual, the method comprising:
modulating a gene comprising a nucleic acid at least functionally equivalent to a nucleic acid

identifiable by a signature sequence as identified ~~as shown~~ in Table 1, Table 2 or Table 3.

7. (Currently amended) The method according to ~~claim 6~~ claim 6, wherein said gene modulates a signal transduction cascade pertaining to an immune response in the individual.

8. (Currently amended) The method according to ~~claim 7~~ claim 7, wherein said signal transduction cascade modulates the production of cytokines, chemokines, growth factors, or combinations thereof.

9. (Currently amended) The method according to claim 6, wherein said gene modulates an action selected from the group consisting of sensory nerve activation, a ~~Th1 mediated~~ Th1-mediated immune response, a ~~Th2 mediated~~ Th2-mediated immune response, the generation of anti-oxidants, the generation of free radicals, a CDS^+ T-lymphocyte response, or combinations of any thereof.

10. (Previously presented) The method according to claim 6, wherein the gene encodes a gene product capable of modulating an immune response.

11. (Previously presented) The method according to claim 6, wherein said immune response includes airway hyperresponsiveness and/or bronchoalveolar manifestations of asthma.

12. (Previously presented) The method according to claim 6, wherein the gene is modulated by transducing a cell of the individual.

13. (Currently amended) A substance capable of modulating a gene, said substance comprising:

a nucleic acid at least functionally equivalent to a nucleic acid identifiable by a signature sequence as identified ~~as shown~~ in Table 1, Table 2 or Table 3.

14. (Original) A medicament comprising the substance of claim 13 in a pharmaceutically acceptable form and present in an amount sufficient to produce a therapeutic effect.

15. (Original) A method of treating an immune response observed with airway hyperresponsiveness and/or bronchoalveolar manifestations of asthma in a subject, the method comprising administering the substance of claim 14 to the subject.

16. (Currently amended) A process for producing an antagonist against a proteinaceous substance encoded by a nucleic acid at least functionally equivalent to a nucleic acid identifiable by a signature sequence as identified ~~as shown~~ in Table 1, 2 or 3.

17. (Currently amended) The process of ~~claim 16~~ claim 16, wherein said antagonist is an antibody or functional fragment or functional equivalent thereof.

18. (Currently amended) An antagonist directed against a proteinaceous substance derived from a nucleic acid at least functionally equivalent to a nucleic acid identifiable by a signature sequence as identified ~~as shown~~ in Table 1, Table 2 or Table 3.

19. (Currently amended) The antagonist of ~~claim 18~~ claim 18, comprising an antibody or functional equivalent or functional fragment thereof.

20. (Original) A medicament comprising the antagonist of claim 19.

21. (Previously presented) A method for treating an undesired immune response observed with airway hyperresponsiveness and/or bronchoalveolar manifestations of asthma in a subject, said method comprising administering the antagonist of claim 18 to the subject in a therapeutically effective amount and in a pharmaceutically effective manner.

22. (Original) A method for at least in part decreasing at least one symptom in a mammal suffering from an allergy or asthma, said method comprising:

blocking OtSl-B7 or an equivalent of OtSl-B7 in the mammal.

23. (Original) The method according to claim 22, wherein the OtS1-B7 is blocked by administration of a proteinaceous substance to the mammal.

24. (Original) The method according to claim 23, wherein the proteinaceous substance is selected from the group consisting of an antibody, a functional equivalent thereof, a functional fragment thereof, and mixtures thereof.

25. (Original) The method according to claim 24, wherein the proteinaceous substance is antibody ERTR9.

26. (Previously presented) The method according to claim 22, wherein the at least one symptom is airway hyperreactivity associated with asthma or an elevated level of IgE in the mammal.

27. (Previously presented) The method according to claim 22, wherein said mammal is a human.

28. (Original) A pharmaceutical composition comprising:

a substance capable of blocking OtS1-B7 or an equivalent of OtSl-B7, and

a pharmaceutical acceptable carrier and/or diluent.

29. (Original) The pharmaceutical composition of claim 28, wherein the substance is a proteinaceous substance.

30. (Original) The pharmaceutical composition of claim 29, wherein the proteinaceous substance is an antibody or functional fragment thereof.

31. (Original) The pharmaceutical composition of claim 30, wherein the proteinaceous substance is antibody ERTR9.